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IN-HOME GENERALIZATION OF SOCIAL INTERACTIONS IN FAMILIES OF ADOLESCENTS WITH BEHAVIOR PROBLEMS

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The effects of a three-phase family communication program were evaluated. In the skill-teaching phase, family members were taught reciprocal social communication skills in a clinic setting. During the skill-review phase, each family member practiced the skills in their homes with the teacher. During the home-based family conference phase, each family was taught to use a structured format to resolve current family issues using their newly acquired skills. In-home parent–youth interactions were observed during a series of 1-hr sessions that involved directed and nondirected situations. Evaluation included a multiple baseline design across skills during the skill-teaching phase and a multiple baseline design across families for the family conference phase. Although the procedures of the skill-teaching phase resulted in parent–adolescent dyads learning to use the skills in the teaching setting, competent use of the skills in the home was not observed until the family conference phase was implemented. These results suggest the importance of home-based intervention if changes are to be obtained at home.

DESCRIPTORS: families, social interaction, generalization, communication, adolescents

Families with adolescents who exhibit behavior problems (adolescents who have been referred to the juvenile court, who are frequently truant, or who have discipline problems) often have difficulties in communication, problem solving, and interpersonal relationships (Alexander, 1973; Prinz, Rosenblum, & O'Leary, 1978). We do not know whether difficulties in interpersonal relationships within these families affect or are affected by the other problems facing family members, but difficulties in interacting with each other are a frequent complaint. As a result, a number of investigators (Alexander & Parsons, 1973; Foster, Prinz, & O'Leary, 1983; Gordon, Arbuthnot, Gustafson, & McGreen, 1988; Kifer, Lewis, Green, & Phillips, 1974; Robin, 1981; Robin, Kent, O'Leary, Foster, & Prinz, 1977; Serna, Schumaker, Hazel, & Sheldon, 1986; Weathers & Liberman, 1975) have developed intervention strategies that successfully teach social communication skills to adolescents with behavior problems and to members of their families. In most studies so far, measures of changed parent–youth communication skills have not been taken in the home. In one study, Kifer et al. (1974) gathered in-home data under conditions in which the parents and adolescents knew they were to perform negotiation skills. Although the results indicated a change between pre- and posttest measures, whether the family members could perform the negotiation skill during freely occurring or nondirected situations is unknown.

Another group of researchers (Foster et al., 1983; Robin, 1981) asked parent–youth dyads to audiotape problem-solving interactions in their home. A critical analysis revealed mixed results concerning the generalization of the problem-solving skill in the home. Thus, additional research is needed to

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determine the extent to which families and adolescents successfully transfer their newly acquired communication skills to interactions in the home and maintain those skills over time.

The present study was designed to evaluate the effects of the skill-teaching procedures, developed by Serna et al. (1986), on parent–adolescent interactions in the home, and if necessary, to develop and evaluate the effectiveness of procedures designed to promote the generalization of the learned social communication skills in nondirected interactions in the home.

METHOD

Subjects

Three families in a midwestern college town volunteered to serve as subjects by responding to a newspaper advertisement soliciting families with parent–adolescent communication problems. During the initial contact, the program was described and family members signed informed consent forms. In a family interview, the following information was gathered.

Family 1 was of the middle socioeconomic class and consisted of a mother, a stepfather (who had been a member of the family for 12 years), and 2 adolescent daughters (ages 14 and 16). Family members reported severe negative verbal interactions (e.g., yelling and threatening suicide) between the stepfather and the daughters, manipulative and promiscuous behavior on the part of the both daughters, and marital problems between the parents.

Family 2 was of the lower socioeconomic class and consisted of a single mother and 5 adolescents (4 males and 1 female), ages 12, 13, 14, 15, and 16. Family members reported physical abuse among the siblings (e.g., an argument between 2 siblings ended in 1 brother breaking the arm of the other brother), lack of parental control (e.g., adolescents ignored mother's attempts at limit setting and enforcing consequences), and an inability to express themselves appropriately when upset or angry.

Family 3 was of the middle socioeconomic class and included a mother, a stepfather (who had been a member of the family for 1 year), and a 13-year-old son. This newly formed family reported communication problems between the parents and the adolescent (e.g., the son either refused to talk to the parents or argued with them), as well as discipline (e.g., failure to follow home rules) and academic problems (e.g., failing several academic subjects as well as physical education) for the teenaged son. Thus, 5 parents (2 stepfathers and 3 mothers) and 8 adolescents (5 males and 3 females) participated in the investigation.

Settings

During the skill-teaching phase, family members met in a university building. Initial teaching was provided for all the parents in one group and all the youths in another group. Each group met in separate meeting rooms, each equipped with a large table, chairs, and a chalkboard. The testing of each individual and the teaching and testing of parent–youth interactions took place in adjacent offices, each furnished with one desk, three chairs, and a tape recorder. After the skill-teaching phase, the remainder of the study took place in each family's home (see in-home testing procedures).

Measurement of Behaviors

Table 1 presents the three categories of measures collected in this study: behavior checklists, self-reports, and social validation ratings.

Behavior checklists. Behavior checklists (Hazel, Schumaker, Sherman, & Sheldon-Wildgen, 1981a; Serna et al., 1986) were used to score participants' performance of the components of the various social skills during all tests. A score of 2 was given if the individual performed the skill (e.g., get the person's attention) exactly as indicated on the checklist; a score of 1 was given if the individual approximated the desired behavior described in the checklist; a score of 0 was given if the individual performed the skill inappropriately or did not perform the skill at all. Because family members sometimes combined skills or added skills other than the one described in the directed in-home test, and because there was no prior specification of what social situations family members were to discuss in the non-

Table 1
Measures Gathered on Individual Family Members' Skills and Reciprocal Parent–Youth Skills

Conditions	Behavior checklists used by independent observers			Self-reports used by parents and youths			Social validation, ratings by community, home setting
	Teaching setting		Home setting				
	Individual performance	P/Y interactions	P/Y interactions	Skill report, home setting	Communication questionnaire home setting	Consumer satisfaction, teaching setting	
Pretest	X	X	X	X	X		
Baseline	X						
Postteaching probes							
After each skill learned	X	X					
After four skills learned			X	X	X		
After six skills learned			X	X	X		
After all skills learned (posttest)	X		X	X	X	X	
Skill review							
Family 2: 6 months after skill learned			X	X	X		
Family 3: 6, 9, 10, and 11 months after skill learned			X	X	X		
Family conference							
After criteria met			X	X	X		
9-month follow-up			X	X	X		X

directed in-home tests, we could not identify in advance the specific social skill to score. Consequently, observers first identified or labeled any social skill the participants apparently were using and then scored each component of that skill according to the corresponding checklist.

In families in which 2 parents (or more than 1 youth) participated in the in-home interactions, the parents' (or the youths') performance scores were summed for all the skills. These combined scores were then divided by the total possible score to attain an overall parent (or youth) score for the interactions.

Interobserver reliability. Agreement between observers on whether family members used one of the target social skills and exactly what skill (the skill label) within the directed and nondirected in-home tests was evaluated for 10% of the tests. There was 91% agreement on whether family members used one of the target skills and 97% agreement on the skill labels.

Reliability on the behavior checklist performances was evaluated for 25% of tests in the teaching setting and 15% of tests in the home. Two observers independently scored behavior by either watching it live or listening to an audiotape of the interaction. For scoring tapes, the observers also were provided with a written transcript of the session. A full agreement between observers on a component of a social skill was recorded if both observers gave the same score for the component (e.g., both observers scored the component as a 2); a one-half agreement was recorded if the observers were within 1 point of each other; a nonagreement was recorded if the observers' ratings differed by 2 points. The percentage of agreement for each reliability measure was computed by dividing the total number of agreements by the total possible number of full agreements and multiplying by 100.

The overall percentage of agreement between observers was 93% for the individual youth skill tests, 89% for the individual parent skill tests, 93%

for the reciprocal parent–youth interaction skill tests, 90% for directed parent–youth interactions in the homes, and 91% for nondirected parent–youth interactions in the homes.

All directed and nondirected interactions were transcribed from the audiotapes by one of three primary observers. A fourth observer, who served as reliability observer, also transcribed 5% (156 min) of the audiotapes. Transcripts of the same audiotapes then were compared, word by word. The overall percentage of agreement for each word in the transcripts was 93%, with scores ranging from 88% to 98% on individual samples.

Self-Report, Consumer, and Social Validation Ratings

Three questionnaires were given to the family members. The Parent–Youth Skills Report Questionnaire (given once before skill teaching began and once after all skills had been taught) was designed to measure parents' and youths' perceptions of the youths' ability to perform each social skill. Each item was rated on a scale ranging from "very poor" (1) to "very good" (5). The Parent–Youth Communication Questionnaire (given after each set of in-home tests) was designed to measure the parents' and the youths' perceptions of family communication and overall social interactions. Each item was rated on a scale ranging from a "very poor job" (1) to an "excellent job" (7).

The Consumer Satisfaction Questionnaire, given once after all skills were taught, was designed to measure the parents' and youths' satisfaction with the skill training and the program results. Each item was rated on a scale ranging from "completely dissatisfied" (1) to "completely satisfied" (7).

A measure of social validation was established by asking 27 judges from the community to listen to 85 min of randomly selected audiotaped parent–youth nondirected interactions (5 min per interaction for a total of 17 interactions) and to rate them on a scale ranging from "unacceptable" (1) to "excellent" (7). Of the 27 professionals who volunteered to participate, 2 were secondary school speech therapists, 2 were secondary school counselors, 1 was a secondary drama teacher, and 22 were special education teachers. All the professionals had some prior knowledge of social skills but had not implemented any social skills programs with their students. The interactions were rated with regard to the pleasantness of the interaction, the family members' ability to communicate with one another (e.g., resolve arguments or problems), and the perceived relationship of the interactors.

Experimental Designs

A multiple baseline design across skills (Baer, Wolf, & Risley, 1968) was used to assess the effects of the parent and the youth skill-teaching programs. A multiple baseline design across families was used to assess family members' use of the skills in the home in directed and nondirected interactions as a function of the family conference procedures.

Procedures for Teaching Skills

Skills taught. Seven previously validated social skills for youths from the ASSET Program (Hazel et al., 1981a) were targeted for the youth program (giving positive feedback, giving negative feedback, accepting negative feedback, negotiating, resisting peer pressure, following instructions, and problem solving), and eight parent social skills designed to complement the youth program (accepting positive feedback, accepting negative feedback, giving negative feedback, negotiating, giving rationales, giving instructions, teaching interactions, and facilitating problem solving) were targeted (Serna et al., 1986).

Group skill teaching and individual testing. The seven youth social skills were taught in eight weekly 2-hr sessions over 3 months. Two university students, who had extensive experience leading social skills teaching groups, served as the teachers. They followed the teaching format of the ASSET Program (see Hazel et al., 1981a). In addition, the youths participated in discrimination practice for previously learned skills. During the discrimination practice, the teacher described a specific situation to each youth and required him or her to name the most appropriate skill for the given situation.

The parent group met for 2 hr at the same time as the youth group to learn the skills that were

reciprocal to the ones the youths were being taught. A graduate student with experience leading parent groups served as the teacher and used the same teaching format employed for the youth group (see Serna et al., 1986, for details). Teaching continued until each parent had performed all the components of the targeted skill correctly in a novel role-playing situation.

The individual testing of all youths and their parents occurred before the teaching began (pretest), at the end of each skill-teaching session (post-teaching probes), and after all skill teaching was completed (posttest). To test individual youth and individual parent performance of the skills in the teaching setting, novel situations were selected from a pool of situations that had been collected from youths, parents, and probation officers during previous research efforts (Hazel, Schumaker, Sherman, & Sheldon-Wildgen, 1981b). All individual youth- and parent-testing sessions were audiotaped and began with the observer reading a description of the situation. The parent or youth then role-played that situation with the observer, and the observer scored the person's performance on the corresponding checklist. No cues were presented regarding which skill to use.

Reciprocal parent–youth interaction teaching and testing. After every weekly skill-teaching session, a teacher met with each parent–adolescent dyad and practiced the reciprocal skills until each person, simultaneously, performed all the skill components correctly (see Serna et al., 1986, for details). When 2 parents were involved in the teaching, the youth practiced with each parent separately until each dyad met the mastery criterion. In Family 2, 2 siblings were selected randomly each week from among the 5 siblings to practice separately with their parent until those dyads met the mastery criterion. The remaining 3 siblings were not required to observe these teaching sessions.

Pretest and posttest measures were gathered on reciprocal parent–youth interactions in the teaching setting prior to the group teaching of each social skill and following the parent–youth interaction teaching of each social skill. A testing session began with the observer asking the parent and the youth to think of a situation that had recently occurred in the home and that fit a certain skill description (e.g., the skill of negotiating is required when two people want different things). The observer never told the participants what specific behaviors to display. Each parent–youth dyad that participated in the parent–youth interaction teaching then role-played the situation while the observer scored and audiotaped the interaction.

Individual youth and parent skill-review procedures. The individual youth and parent skill-review phase was 6 to 11 months long and (for Families 2 and 3) followed the skill-teaching phase. Individual family members practiced their interaction skills with the teacher while another family received the family conference instruction. The skill-review phase was implemented (a) to provide a control for exposure to the teacher, (b) to ensure that each family member continued to perform the social skills at a 90% criterion level in the home, and (c) to determine the effectiveness of repeated practice of the previously learned skills in the home without the family conference intervention.

Twice a month during this condition, the teacher scheduled an in-home skill-review session with each family, privately presented to each family member hypothetical situations for each of the learned skills, and role-played each skill with the individual family member until 90% of the components for each skill were performed correctly. A novel situation was used each time a skill was practiced. Skill interactions between family members were not practiced.

During the skill-review phase, testing of in-home use of reciprocal parent–youth interactions occurred once for Family 2 and four times for Family 3. The testing procedures employed to assess in-home reciprocal interactions in this phase were the same as used in the family conference phase. (Refer to description of family conference phase for details.)

Conditions for Assessing Skill Teaching

Baseline. The individual testing of all youths and their parents occurred before skill teaching began. Depending on the requirements of the multiple baseline design, as few as four and as many

as eight skills were tested in a given session. In addition, pretest measures were gathered on reciprocal parent–youth interactions in the teaching setting prior to the group teaching of each social skill.

Postteaching. During this condition, weekly individual parent and youth skill testing of learned skills took place to assure that each participant maintained a high level of performance over the duration of the skill-teaching phase. Also, testing of reciprocal parent–youth interactions took place following the parent–youth interaction teaching of each social skill.

Procedures for Family Conference Phase

Materials used in the home setting. A family conference card, adapted from the card used by E. Phillips, Phillips, Fixsen, and Wolf (1974), was used to record (a) the family member's name who wished to discuss a problem, (b) family members involved in the problem, (c) description of the problem, (d) the name of the social skill most appropriate for dealing with the problem, (e) whether the steps of the appropriate social skill were reviewed before commencement of the family conference, and (f) results of the family conference. A large plastic file box was used to store the family conference cards in each family's home.

A family conference checklist, designed as a vehicle for organizing the sequence of conference events, was used. The family conference checklist followed the family conference format shown in Table 2.

Assessing in-home use of reciprocal parent–youth interactions. Observations (or testing) of reciprocal parent–youth interactions took place in both directed and nondirected interactions. The directed interactions took place during a 1-hr period in which the observer described characteristics of each skill and then asked the parent and youth to discuss a real-life situation that fit that skill description. The participating family members chose a situation that best fit the described characteristics and then role-played the situation using any skill they chose. These interactions continued until all targeted skills were recorded. During the directed interactions, the following procedures took place. In Families 1 and 3, each parent was observed interacting with each youth. In Family 2, 2 siblings were selected randomly from among the 5 siblings to interact with their parent (the other 3 siblings did not observe).

Following the directed interaction session in the home, observations (or testing) during nondirected interactions took place. This second 1-hr session consisted of conversation among all family members, which was also audiotaped. Family members could choose any room in the house in which to interact but were instructed to stay in one room of the home and to talk about anything. Also, unlike the directed interactions, parent and youth could freely participate in any nondirected interaction taking place in the conversation.

Once each observation of directed and nondirected interactions took place, the tapes were transcribed. Observers then identified and labeled each skill occurrence. After each skill was labeled, parent–youth interaction performances were scored according to the appropriate behavior checklist.

Conditions for Assessing In-Home Generalization of Skills

Assessment of in-home generalization of skills occurred before skill teaching began (baseline), during skill teaching, after skill teaching, during the skill-review phase (for Families 2 and 3), during the family conference phase, and at a 9-month follow-up.

Baseline. Prior to the skill-teaching phase, observations of directed and nondirected interactions took place for each family. During the first 1-hr observation of directed interactions, observers described characteristics of each skill and then asked the parent and youth to discuss a real-life situation that fit that skill description. The family members role-played each situation until all targeted skills were observed and recorded. The second 1-hr observation of nondirected interactions consisted of taped conversation among all family members. During each observation, the families were asked to engage in directed and nondirected interactions, with the explanation that the teachers wanted to

observe how the family members talked to each other in the home.

During skill teaching. Assessment of the in-home use of reciprocal skills during the skill-teaching phase consisted of two observation sessions over a 2-month period. The first session consisted of observations of directed and nondirected interactions after four social skills had been taught in the skill-teaching setting. The second session consisted of observations of directed and nondirected interactions after six social skills had been taught in the skill-teaching setting.

After skill teaching. Immediately after the skill-teaching phase took place, another observation of the in-home use of reciprocal skills was scheduled for each family. During this session, directed and nondirected interactions were observed.

Skill review. For Families 2 and 3, observations continued while the skill-review phase procedures were implemented in the home. During each observation, the families were asked to engage in directed and nondirected interactions, with the explanation that the teachers wanted to observe how the family members talked to each other in the home.

Family conference teaching. During the family conference condition, family members participated in family conference teaching sessions held once a week for 3 hr over 9 to 11 months (depending on the family). The family conference teaching, conducted in each home, began with a seven-step description of the family conference (see Table 2). Once the family members understood the family conference procedure, the teacher and family engaged in their first family conference in which the teacher modeled how to facilitate or moderate the conference.

Once the resolution of the first issue occurred, the teacher designated 1 parent to be the moderator for the remaining issues in the family conference. The teacher them prompted, corrected, and praised family members' efforts. Family members rehearsed each section of the family conference until they performed it correctly. The teacher ended the session by giving feedback to each family member and scheduling the next weekly family conference.

Table 2
Family Conference Format

1. Family conference preparation: Family members fill out family conference cards for each problem they wish to discuss.
2. Initiation of family conference: Moderator collects cards and asks family members to say something positive to another family member.
3. Identification of the problem: Moderator chooses a card and asks family member to describe the situation, problem, or issue.
4. Selection of appropriate skill: Family member selects appropriate social communication skill to be used for problem resolution.
5. Problem resolution: Moderator asks family members to resolve the problem through the use of the selected social communication skill.

   (Repeat Steps 3 through 5 until all problems are discussed or resolved)
6. Family conference effectiveness: Family members evaluate the interactions that took place during family conference (e.g., positive comments as well as how performances could improve).
7. Conclusion: Moderator ends the family conference by asking each member to say something positive to one other family member.

Weekly family conferences. During the weekly family conference, the teacher observed and gave feedback until (a) the family exhibited at least 90% of the designated skill components in each social skill interaction for three consecutive family conferences, and (b) the teacher did not have to intervene to resolve a conflict. Each time these criteria (family members were not aware of the criteria) were met, an in-home observation of directed and nondirected interactions was scheduled. This sequence continued until family members performed 80% or more of the skill components in the directed and nondirected interactions.

At this point, the format of the family conference became less formal, consisting of the same sequence of events, but family conference cards were not used and a moderator was not appointed. If the family members continued to perform at least 90% of the skill components during the family conference and the teacher did not have to intervene to resolve a conflict, the family was then discharged from treatment (in each case, families met those criteria on

the first observation). Families were not aware of the discharge criteria.

Follow-up. Nine months after the family was discharged from treatment, data were gathered on the in-home use of reciprocal parent–youth interactions in directed and nondirected interactions. The instructions to the family members were the same as in previous observation sessions.

RESULTS

Effects of Skill Teaching on Individual Social Skills

Figure 1 presents the average performance by the group of 5 parents for each of the eight social skills, as assessed during individual testing sessions in novel role-play situations. Each data point was obtained by adding the 5 individual parents' scores, dividing by the total possible scores, and multiplying by 100. During the baseline condition, the mean scores for each skill ranged from 7% to 62%. After the teaching procedure was implemented for each skill, the mean scores increased immediately and ranged from 88% to 100%. An analysis of each parent's scores revealed that all parents improved their scores on all skills substantially in the first individual test session after the teaching of each skill.

Data obtained during individual testing in novel role-play situations for the 8 youths also are shown in Figure 1. The mean scores for youth performances of each skill during the baseline condition ranged from 9% to 78%. After teaching each skill, the youths' mean scores increased and ranged from 67% to 100%. Skill performance increased only after teaching each skill for each youth. Two booster sessions (in which additional training was provided to all youths) were required when 2 youths' performances did not improve initially after the problem-solving and the giving negative feedback skill-teaching sessions.

Effects of Skill Teaching on Parent–Youth Interactions in the Teaching Setting

Parent–youth interaction data, collected during the baseline condition and immediately after each pair of reciprocal skills had been taught, are shown in Figure 2. Prior to teaching, the overall mean score for the parents was 39%, with individual scores ranging from 0% to 100% on each skill. Similarly, the overall mean score for the youths was 44%, with individual scores ranging from 0% to 100% on each skill. The overall mean postteaching score for the parents was 94% (range, 80% to 100%) and 97% for the youths (range, 75% to 100%).

Effects of Family Conferences on Directed Parent–Youth Interactions in the Home

The mean percentages of skill components performed correctly by members of each family at home during directed parent–youth interactions are represented in Figure 3. In families in which 2 parents participated (Families 1 and 3), the parents' scores were averaged to yield an overall parent score. Similarly, in families in which more than 1 youth was present (Families 1 and 2), the youths' scores were averaged to show an overall youth score.

During the baseline condition, the combined scores of all the parents' and the combined scores of all the youths' directed interactions were 33% and 38%, respectively. These combined scores improved somewhat during and after the skill-teaching condition. When the family conference condition was implemented for each family, and the family members met the family conference criteria,

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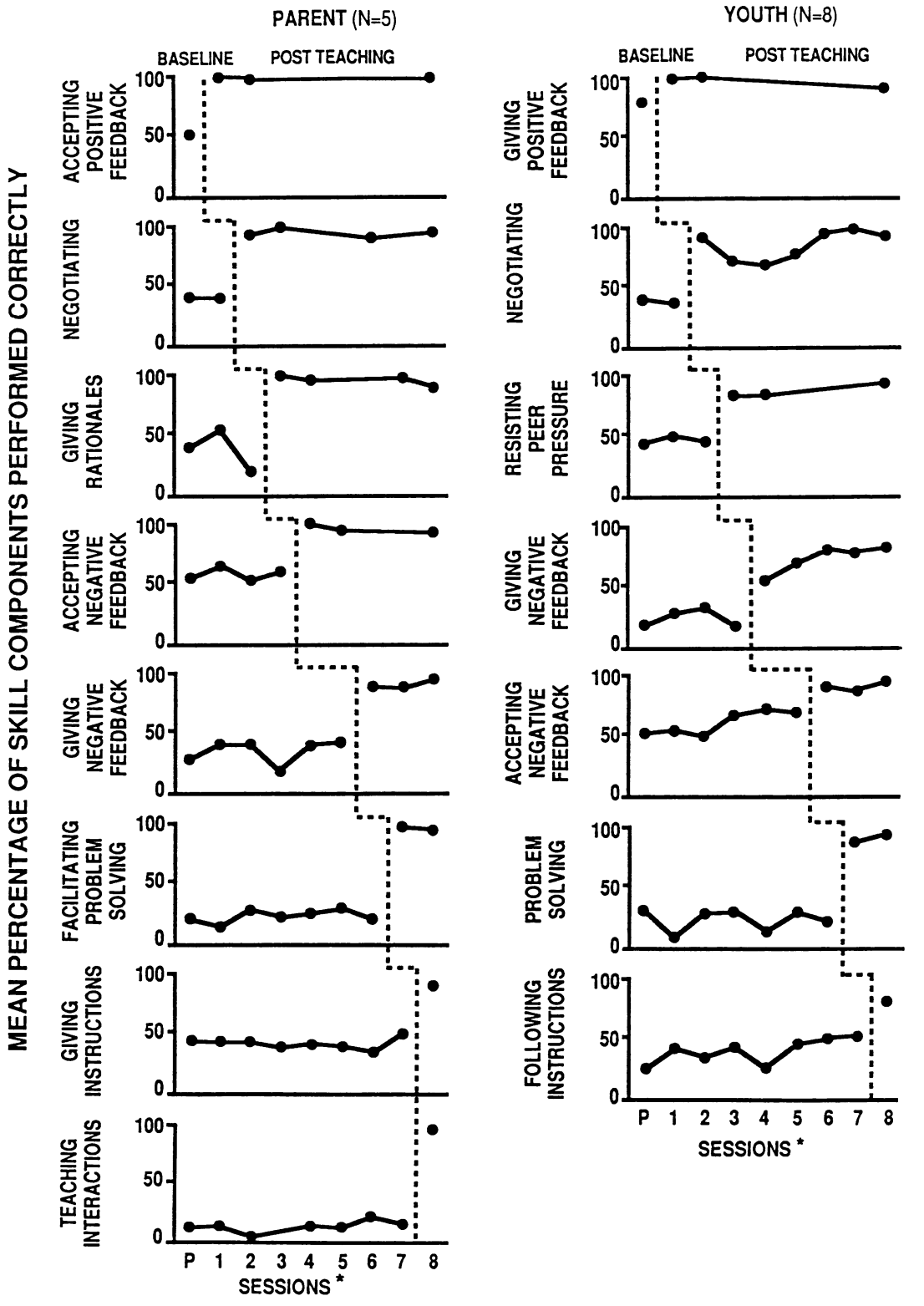
Figure 1. Mean percentage of skill components performed correctly for each skill in individual testing situations. The left portion represents the average of the 5 parents' test scores, whereas the right portion represents the average test scores of the 8 youths. Session 5 (*) was a review session due to a 3-week break from teaching. Booster sessions (one before Session 5 for the skill of giving negative feedback and one before Session 8 for the skill of problem solving) were required when the performance of 2 youths did not significantly improve.


MEAN PERCENTAGE OF SKILL COMPONENTS PERFORMED CORRECTLY
PARENT (N=5)
YOUTH (N=8)
BASELINE
POST TEACHING
ACCEPTING POSITIVE FEEDBACK
NEGOTIATING
GIVING RATIONALES
ACCEPTING NEGATIVE FEEDBACK
GIVING NEGATIVE FEEDBACK
FACILITATING PROBLEM SOLVING
GIVING INSTRUCTIONS
TEACHING INTERACTIONS
GIVING POSITIVE FEEDBACK
NEGOTIATING
RESISTING PEER PRESSURE
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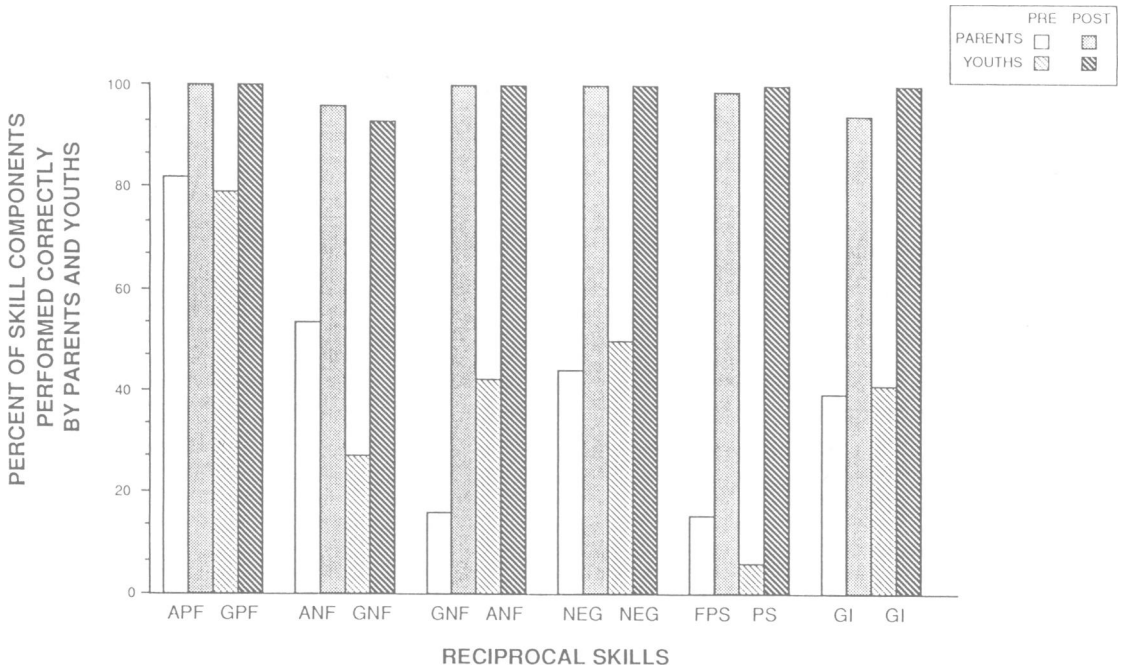

Figure 2. Pre- and posttest parent–youth interaction scores in the skill-teaching environment. APF = accepting positive feedback, GPF = giving positive feedback, GNF = giving negative feedback, ANF = accepting negative feedback, FPS = facilitating personal problem solving, PS = problem solving, NEG = negotiating, GI = giving instructions, FI = following instructions, RAT = giving rationales, TI = teaching interaction.

the skill performance scores increased to 91% for the parents and 93% for the youths. These scores were maintained at the 9-month follow-up evaluation.

Effects of Family Conferences on Nondirected Interactions in the Home

The mean percentages of skill components performed correctly by members of each family during nondirected interactions in the home are represented in Figure 4. During the baseline condition, the overall mean parents' score and the overall mean youths' score for all three families in nondirected parent–youth interactions were 36% and 55%, respectively. These scores did not improve in subsequent conditions until after the family conference condition was implemented, and directly after the family members had met the family conference criteria. The overall parents' score for all three families improved to 84%, and the overall youths' score improved to 82%.

Special note is made of the second observation of Family 3 during the family conference condition. During this observation, the parents elected to solve an issue that did not involve the youth and continued for most of the observation hour. Consequently, the youth did not have an opportunity to exhibit interactions with the parents. The parents' skill performance score for this observation was 88%.

The evaluation that took place at the 9-month follow-up remains somewhat unclear, because few opportunities were provided for the skills to be exhibited (e.g., members of Family 2 only engaged in pleasant conversation).

Questionnaire Results

On the 5-point Parent–Youth Skill Self-Report Questionnaire, the preteaching ratings for all seven targeted youth skills ranged from 2.1 to 3.7, with

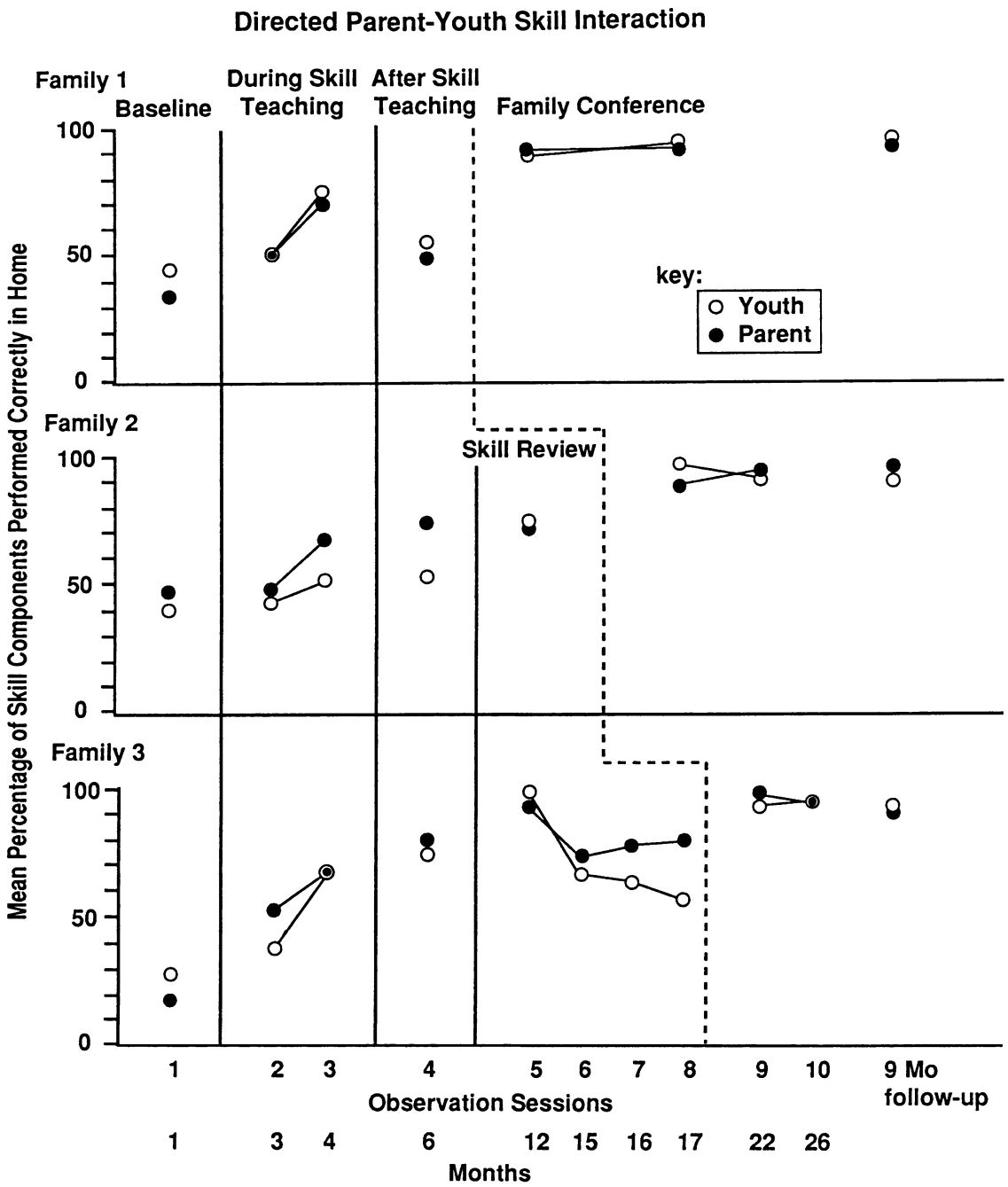

Figure 3. Mean percentage of skill components performed correctly by members of each family during in-home directed parent–youth interactions.

a mean of 3. Ratings increased after social skills had been taught, ranging from 4.0 to 4.6 with a mean score of 4.2. Results from the 7-point Parent–Youth Communication Questionnaire revealed that the parents' and youths' perceptions of their overall communication skills also improved from an overall mean rating of 3.6 prior to teaching social skills to an overall mean rating of 5.3 during the family

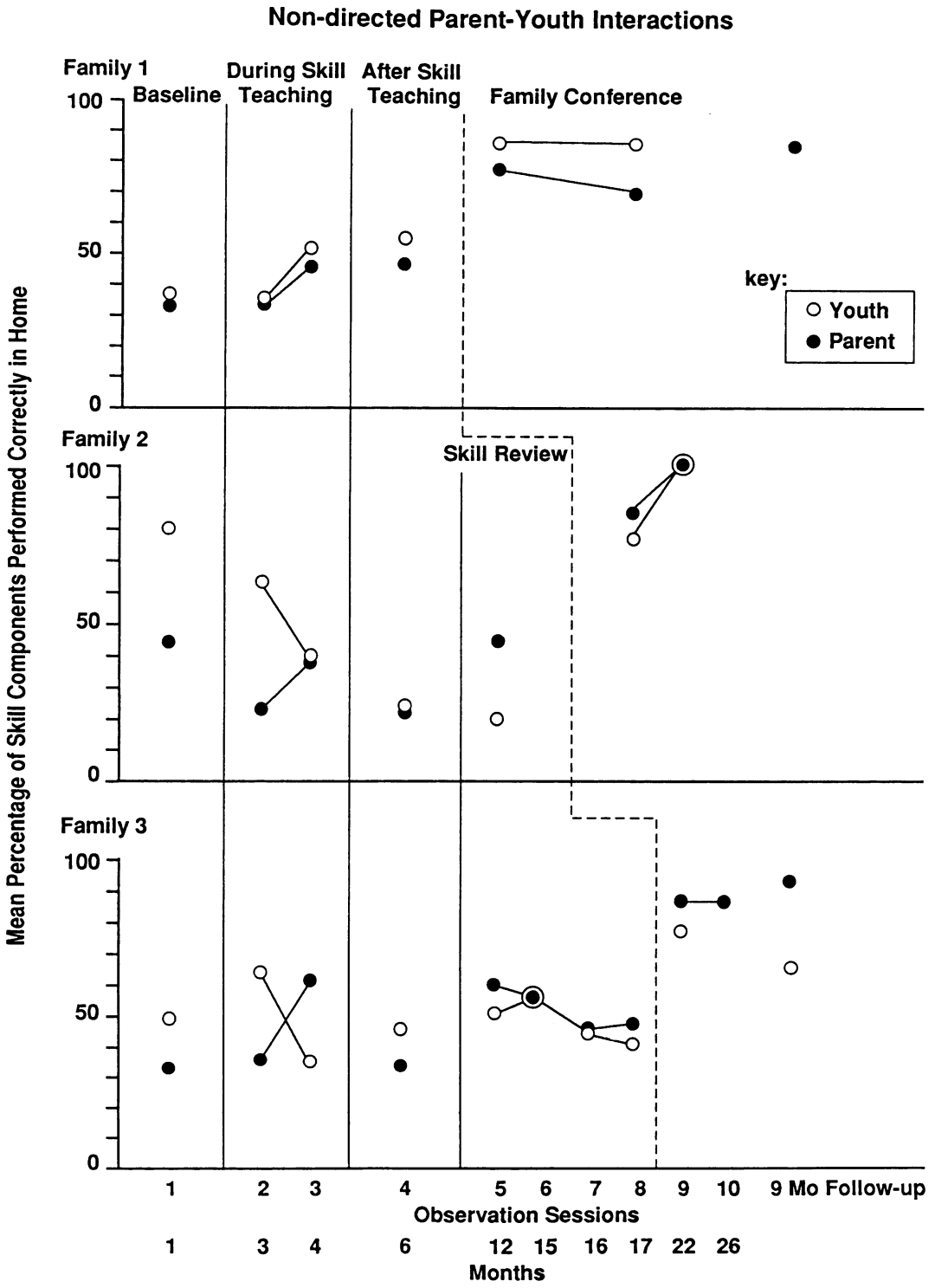

Figure 4. Mean percentage of skill components performed correctly by members of each family during nondirected parent–youth interactions.

conference condition. The Consumer Satisfaction Questionnaire, designed to evaluate the satisfaction of the parents and youths with the teaching program, yielded mean scores within families of 5.5 to 7.0.

Judges evaluated audiotaped parent–youth interactions on a 7-point scale as a measure of social validation. The judges' ratings of interactions prior to teaching averaged 3.2, and during teaching averaged 2.7. After teaching their ratings averaged 4, during the skill-review phase they averaged 3.3, and they increased during the family conference phase and follow-up to 5.0 and 5.2, respectively.

DISCUSSION

The major findings of the study were that (a) the teaching of social communication skills resulted in substantially increased use of skills by adolescents and their parents in the teaching setting, replicating the results of Serna et al. (1986); (b) the teaching of social communication skills was associated with some generalization in the use of the skills to the home during directed interactions between adolescents and their parents, but there was little generalization of the skills to the home during nondirected parent–adolescent interactions; (c) regular review and practice of the skills in the home had no appreciable effect on use of the skills during either directed or nondirected parent–adolescent interactions in the home, but the use of the family conference procedure produced high levels of generalization in both types of interactions; (d) the skill-teaching phase and the family conference phase were both associated with marked improvements in the ratings of family members of their communication and interactions.

The finding that generalized use of the social communication skills in both directed and nondirected parent–adolescent interactions was promoted by the procedures of the family conference is promising and poses a number of questions for future research. What aspects of the family conference procedures were responsible for promoting generalization? There are several generalization-inducing methods described by Stokes and Baer (1977) that might have been operating. First, the family conference procedures involved teaching family members to use the skills in the home in response to real-life problems and to reach an acceptable resolution of these real-life problems. This combination of procedures might involve the use of common stimuli (the home and similar problems) together with an introduction to natural maintaining contingencies (to the extent that family conferences resulted in the resolution of real-life problems). Second, the family conference procedures involved teaching family members to select or label the skills to solve a problem. This may have led them to use similar labeling of problem situations outside the family conferences, a possible example of mediated generalization. Third, the family conference procedures involved teaching family members skills to resolve an increasing number and diversity of problems. This aspect perhaps illustrates the teaching of sufficient exemplars.

Three limitations of the results should be noted. First, the small number of participating families pose obvious limitations in terms of external validity. Further replications are needed to substantiate the present findings. A second limitation concerns the single baseline observation for the family in the home. Due to the intrusiveness of the home observations, we elected to make only one home observation prior to starting skill teaching. Additional baseline observations, when possible, are recommended.

Third, whether Families 1 and 2 maintained their skills during the follow-up observation of nondirected interactions cannot be determined. During this observation session, Family 2 exhibited only pleasant conversation. Similarly, members of Family 1 were able to talk about coming events, with the mother giving one rationale (giving rationale skill) for a certain behavior the entire hour. Although these behaviors are positive, they do not indicate that family members were able to implement needed skills if a problem arose. It should be noted, however, that these families were not able to converse pleasantly with each other during 1-hr observation of nondirected interactions until communication teaching in the home occurred.

Although the results of the present study need to be viewed with caution because of the small sample size, the effects produced by the family conference procedures seem very promising and support its use (e.g., Dreikurs, Gould, & Corsini, 1974; Fixsen, Phillips, & Wolf, 1973; D. Phillips, 1975). The results also indicate the importance of observing nondirected parent–youth interactions in the home. This research could contribute to the understanding of family behaviors and the development of effective treatment interventions.

Perhaps the most important area for future work is one of systematic replication to evaluate whether the family conference procedures can enhance the generalization of previously taught skills to naturally occurring parent–youth interactions and, if so, what aspects of the procedures contribute to this enhancement of generalization. Further, to develop treatment programs with maximal impact, it would be extremely useful to know how many and what kinds of opportunities to use, what types of interpersonal skills typically occur in parent–youth interactions, and the extent to which various types of interpersonal skills are used. Finally, the interpersonal skills taught and generalized as part of an intervention program need additional social validation as to their social acceptability and effectiveness in leading to satisfactory resolution or avoidance of parent–adolescent conflicts.

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